ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION,

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. VII. OCTOBER, 1896. No. 8.

CONTENTS:

Oestlund—Ants as personal property holders 225
Ottolengui—Types in the Neumoegen collection..... 227
Ricksecker—On a new cyanide bottle.. 230
Baker—Biological studies in ento'gy... 231
Stanley—The praying mantis, etc..... 232
Wolcott—Coleoptera of central Illinois 234
Slosson—Singular habit of a Cecidomyid..... 238
Spider farming 239
Fiske—List of Rhopalocera, etc..... 240
Editorial 243
Economic Entomology 245
Notes and News..... 247
Entomological Literature..... 249
Doings of Societies..... 249
Entomological Section..... 255
Cockerell—The seventy-second Perdita 255

ANTS AS PERSONAL PROPERTY HOLDERS.

By O. W. OESTLUND, Minneapolis, Minn.

It is a well known fact that plant-lice are commonly attended by ants, which feed upon the sweet fluid that the aphis emits from time to time. But it is probably not as well known that ants, in some cases at least, will appropriate such colonies as their own property, and will guard them most effectively against all intruders, especially against ants of a different species that may attempt to get some of the sweet fluid.

Aphis thaspii is a very common aphis in Minnesota on the umbels of *Thaspium aureum*, which seems to be much sought for by ants; probably on account of the choice quality of the fluid they give, like our own breeds of Jerseys. There are at least four distinct species that are commonly found to attend them.

Without attempting to give the scientific name of the ants in question, it may suffice to state that one was a small black ant, the second a small brown ant, the third a rather large brown ant, and the fourth a large black ant with the anterior part of the body reddish. As it was noticed that each colony of aphis was attended

by only one species of ants, there presented itself an opportunity to make some simple experiments that might throw some light on the relationship of ants to the aphids as well as to each other. The number attending a given colony varies, as individuals are continually coming and going, but at no time will the colony become quite deserted.

Capturing one of the small black ants and transferring it to a plant on which the small brown ants were found, it started up the stem, but on reaching the aphids it soon encountered one of the brown ants, which at once gave the chase and the intruder got down the plant as rapidly as possible. Transferring the same to a plant on which the large brown or black ants were found, it would also at once be attacked and had to beat a rapid retreat. Now transferring one of the large black ants, which were at least twice the size of the smaller, and starting it up a plant on which the small black ants were found, it would also at once be attacked. Sometimes the large ant, which probably considered itself more than a match for the smaller ones, would seem to pay no attention to the attack at first, but proceeded among the aphids to gather the sweet fluid; but as the attack of the first would soon be re-enforced by others it did not take long to convince the large one that he was trespassing upon private property, and he would beat a quick retreat or let himself fall to the ground. Repeated attempts on all the four species to get them to mix on the same plant invariably resulted in the driving off of the intruder, while the small ants, as well as the large brown one, would retreat by running down the stalk: the large black ant would usually let itself drop to the ground as soon as it became aware of its mistake, evidently having found this the surest and quickest way of freeing itself from a combined attack of the smaller ones.

In transferring, on the other hand, one of the black ants, or either of the four, to a different plant on which the same species was found, it would meet no resistance, but had full freedom to the use of the Jerseys.

These simple experiments, which were repeated several times with practically the same results, go to show that ants hold property, not only as real-estate in their homes or nest, but also what might well be called personal property, which they may acquire and hold at some distance from their homes, just as man would hold his herd of cattle on the prairies. They will also take care of and defend their property with as much spirit and effect as ever a cowboy defended the herd intrusted to his care.

TYPES IN THE NEUMOEGEN COLLECTION.
WITH A FEW NOTES THEREON.

By Dr. RODRIGUES OTTOLENGUI.

Lussa nigroguttata ♂ Grt. Florida.
Tricholita inconspicua ♂ Grt. Arizona, Doll.
Tricholita completa ♂ (♀) Grt. Arizona, Doll.
Nonagria permagna ♀ Grt. Florida.
Fota armata ♀ (♂♀) Grt. Arizona, Morrison.
Fota minorata ♂ (♀) Grt. Arizona, Morrison.
Tapinostola orientalis ♀ Grt. Maine.
Leucania bicolorata ♂ (♀) Grt. Arizona, Doll.
Leucania stolata ♀ Smith. Arizona, Doll.

This specimen is rich in "type labels." One is in handwriting of Mr. Grote, and one in the chirography of Prof. Smith. The explanation is that Mr. Grote named and labeled the specimen, but appears not to have published any description of it. Later Prof. Smith described the species, but, to avoid possibility of synonymy, adopted the name selected by Mr. Grote.

Leucania farcta, var. *roseola* ♂ Smith. British Columbia.
Leucania imperfecta ♂ Smith. Arizona.
Ufeus sagittarius ♂ Grt. California.
Eucalyptera obscura ♂ Grt. Arizona.
Adipsophanes terminellus ♂ Grt. Texas.
Adipsophanes egestis ♀ Smith. Arizona, Doll.

Again we have type labels from both Mr. Grote and Prof. Smith, and here also Prof. Smith has courteously adopted Mr. Grote's name for a species which he had not described.

Fotella notalis ♂ Grt. Arizona, Doll.
Caradrina fragosa ♂ Grt. Arizona, Doll.
Caradrina civica ♂ ♀ Grt. New Mexico.
Pyrophila triquetra ♀ Grt. Arizona, Doll.
Orthodes nitens ♂ ♀ Grt. Maine.

This is a synonym of *enervis* Gn.

Orthodes virgula ♂ ♂ Grt. Arizona, Doll.
Orthodes irrorata ♂ (♀ ♀) Smith. California.

This specimen bears a printed type label, but there is none in handwriting of Prof. Smith. In my opinion all types should be labeled by those who describe the species. However, in Prof. Smith's Catalogue of the Noctuidæ, a note in connection with this species reads: "Types are in the Graef, Neumoegen and Edwards collections."

Stretchia variabilis ♂ ♀ Smith. Colorado, Bruce.

Tæniocampa peredia ♀ (♂) Grt. Maine.
Tæniocampa columbia ♂ (♂♀) Smith. British Columbia.
Tæniocampa consopita ♀ (♂♂) Grt. Arizona, Doll.

This is a synonym of *modifica* Morr.

Tæniocampa perforata ♀ (♂) Grt. Arizona, Doll.
Tæniocampa addenda ♂ ♀ Smith. California.
Tæniocampa ferigera ♀ (♂) Smith. British Columbia.
Tæniocampa quisana ♂ Smith. British Columbia.
Trichoclea decepta ♂ (♀) Grt. Arizona, Doll.
Trichoclea postica ♀ Smith. Colorado, Bruce.
Trichocosmia inornata ♂♀♀ Grt. Arizona, Morrison.
Trichorthosia paralella ♀ Grt. New Mexico.
Trileuca buxea ♂ (♀) Grt. Texas.
Trileuca dentalis ♀ Smith. Texas.

Should the "type" specimen long remain the sole representative of this species, I think it will be safe to decide that this species is invalid. It appears to be identical with *Xanthoides transversa* from India, and its shabby appearance lends color to the theory that it, the "type," *may have traveled a long distance after death.* It was received by Mr. Neumoegen from Mr. Hartman, of Houston, Texas, a gentleman whose collection includes specimens from all parts of the world, so that it is quite possible that an innocent error has occurred.

Cea immacula ♂ Grt. Arizona.

In Smith's check list, as well as in his catalogue, this name is written *immaculata.* Mr. Grote's original description is not at hand, but the type label in his chirography is as above.

Anchocelis digitalis ♂ Grt. Maine.
Orthosia citima ♂♀ Grt. Arizona.
Homoglæa hircina ♂ (♀) Morrison. Illinois.
Scopelosoma moffatiana ♂ (♂) Grt. Maine.
Xylina pexata var. *washingtoniana* ♀ Grt. Washington Territory.
Nystalea indiana ♀ Grt. Indian River, Florida.

A note by Mr. Neumoegen calls this a Notodontid.

Morrisonia bisulca ♂ (♀) Grt. Arizona, Doll.
Xylomiges pulchella ♂ (♀) Smith. British Columbia.
Xylomiges candida ♂ (♀) Smith. British Columbia.
Xylomiges peritalis ♂ Smith. Colorado, Bruce.
Xylomiges cognata ♂ (♂♀♀) Smith. British Columbia.
Pleroma obliquata ♂ (♂♀) Smith. Colorado, Bruce.
Pleroma apposita ♂ Smith. British Columbia.

A wonderfully beautiful specimen.

Cucullia montanæ ♂ (♂) Grt. New Mexico.

Cucullia cita ♂ Grt. Arizona.

A synonym of *lætifica* Lint.

Cucullia bistriga ♂ Smith. Colorado, Bruce.
Rancora strigata ♂ Smith. British Columbia.

This is a "type" of both genus and species.

Eutella pulcherrima ♂♀ Grt. New Jersey.
Telesilla carneola ♀ Smith. New Mexico.

The generic name *Ogdoconta* Butl., has priority according to Smith's list and Catalogue.

Plusia scapularis ♂♀ Hy. Edwards. British Columbia.
Plusia angulidens ♀ (♂♂♀) Smith. Colorado, Bruce.
Plusia celsa ♂♀ Hy. Edwards. Oregon.
Plusia accurata ♀ Hy. Edwards. Washington.

Doubtfully placed in this genus.

Gonodonta unica ♂ Neum. Florida.
Basilodes chrysopis ♂ (♀) Grt.
Basilodes territans ♀ (♂) Hy. Edwards. Arizona.
Basilodes mirabilis ♂ Neum. Arizona, Morrison.
Stiria sulphurea ♂♀ Neum. Arizona, Doll.

Curiously enough Mr. Neumoegen described *Stiria nanata*, "Papilio" vol. iv, p. 95, and the "type" should be here, whereas there is no representative whatever of the species in the collection.

Stibadium aureolum ♂ (♂♀) Hy. Edwards. Arizona, Doll.
Stibadium curiosum ♂ Neum. Arizona, Morrison.
Plagiomimicus triplagiatus ♀ Smith. New Mexico.
Plagiomimicus expallidus ♂ Grt. Montana.
Plagiomimicus viridifera ♂ Grt. Arizona.
Acopa incana ♂ (♀) Hy. Edwards. Arizona, Doll.
Neumoegenia poetica ♂♂ Grt. Arizona, Doll.

This is the "type" of the genus as well as the species. A wonderful insect, with secondaries of pure metallic gold.

Antaplaga sexseriata ♂♀ Grt. Arizona, Doll.
Antaplaga composita ♀ Hy. Edwards. Arizona, Morrison.
Antaplaga thoracica ♂♀ Hy. Edwards. Arizona, Morrison.

Composita and *thoracica* comprise Hy. Edwards's genus *Eulithosia*, and are therefore "types" of a generic name, which is now unoccupied. See Catalogue of Noctuidæ, Smith, page 266.

Grotella dis ♂♀ Grt. Arizona, Doll.
Oxycnemis advena ♂ (♀) Grt. Arizona, Doll.
Oxycnemis perfundis ♂ Smith. Texas.
Oxycnemis nivalis ♀ Smith. Texas.
Copablepharon subflavidens ♂ (♀) Grt. Montana.

Copablepharon longipenne ♂ Grt. Montana.
Thyreion rosea ♂ Smith. Colorado, Bruce.
Chamæclea pernana ♂♀ Grt. Arizona, Doll.

Described in 1881 as a *Chariclea*, and made a new genus *Chamæclea* in 1883, both descriptions being by Mr. Grote. I presume this becomes the type of a new genus as well as of the species, notwithstanding the fact that the species was described first.

Alaria felicitata ♀ Smith. Utah.
Rhodosea julia ♀ (♂) Grt. New Mexico.
Heliodora magnifica ♂ Neum. Texas.

Type of genus as well as species.

ON A NEW CYANIDE BOTTLE.

By L. E. Ricksecker.

Several years ago I invented a new killing-jar, and having thoroughly tested the same, and found it a great improvement on the old jars, I now wish to publish and dedicate it to the free use of the entomological fraternity It consists of a glass jar or bottle of any size, having a good stopper, made of cork or rubber, preferably the latter, through which is inserted a strong glass tube, to contain the cyanide of potassium.

This tube should be closed at the upper or outside end. After filling the tube with the cyanide, the lower end can be plugged with a roll of blotting paper or any porous substance that will allow the fumes to escape into the jar. The insertion of the tube through the stopper should be done in a neat and thorough manner, so that the fumes cannot escape and that the tube cannot slip in or out. If a large rubber stopper is used make the hole somewhat smaller than the tube and force the latter through the hole with pressure.

The advantages of this killing-jar over the old style of jars are many :—

The Cyanide is always in sight.
It does not dissolve so readily.
It cannot "muss" the specimens or the hands.
It is easily renewed or recharged.

The same stopper and charged tube can be used on any number of jars or bottles of the same size. Last, but not least, the jar can, after each day's collecting, be thoroughly washed and dried. This is really *the* advantage, for a clean jar is necessary to clean, satisfactory collecting.

BIOLOGICAL STUDIES IN ENTOMOLOGY.*

By CARL F. BAKER, Fort Collins, Col.

In a recent report I gave an account of a few observations on the habits of some Aculeate Hymenoptera. In connection with the writing of that report I read the interesting series of articles in "Psyche," by Mr. Ashmead, giving a summary of all that is known regarding the habits of American Aculeata. The smallness of the list of species considered, and the meagreness of the information regarding them, is, in view of the number of working entomologists in this country, simply astonishing. A dearth of material cannot be urged as an excuse, for forms of this group are abundant everywhere, and often not waiting for us to come to them, come to us in our own dwellings to take up their abode.

Hymenopterists are not the only specialists laggard in this respect. The lepidopterists have done well, but the dipterists, coleopterists, and neuropterists, have shown a most inexcusable negligence in this direction.

An inspection of some numbers of our entomological journals would almost lead one to believe that the study of entomology in this country had to a large extent really degenerated into a study of "dried bug shells." Classification is but a means to an end,—an immense ruled note-book in which the results of biological investigation may be recorded, each fact in its proper place—in its proper relation to other facts. To be an entomologist it is not at all necessary to describe a "new species," or to know thousands of "bug names." The great entomologist is he who, by long practice, becomes able to SEE quickly and accurately from the entomological point of view, and to record, *scientifically*, what he sees. This is what made Riley's fame, and the fame of many another great entomologist. A young friend of mine, who had a quite erroneous idea of entomological work, suggested to me that when every last bug had been swept into a net, impaled on a pin, and a name given it, that then the entomologist would be "out of a job." I hastened to tell him then that the entomologist's work would be but really begun.

The field of biological work in entomology is one of infinite breadth and grandeur. Life-histories, habits, the intricate relations of insects to plants, and to other insects and forms of life,

* Twelfth bimonthly report to the Say Memorial Chapter.

mimicry, and local and geographical distribution, all offer a multiplicity of questions and problems of surpassing interest. And the good thing about this work is, that no matter how isolated a student may be, or how poor his library or equipment, to him these questions are all open for investigation. And the value of his studies, the importance of his contributions to entomological knowledge, are only limited by his conscientiousness, "stick-to-it-iveness," and ability to WORK.

Some complain of being in an "unfavorable," "poor," or "overworked" locality. I should say, the more so the better. For the greater acuteness and more persistent application that such conditions would necessitate, could only result in studies of greater value, and consequently greater good, both to science and to the worker concerned.

If you do not catch the spirit of such investigation, read any of Darwin's special works, or Lubbock's "Ants, Bees and Wasps." There are three late articles in "Psyche" which echo this spirit, and which are well worth the reading. These are :—

(1). Notes on Habits of *Trypoxylon rubrocinctum* and *T. albopilosum* by G. W. and E. G. Peckham.

(2). Habits and Parasites of *Stigmus inordinatus* Fox, by A. Davidson, M. D., Los Angeles, Cal.

(3). Some Habits of *Formica obscuripes* Forel, with notes on some insects found associated with it, by George B. King, Lawrence, Mass.

THE PRAYING MANTIS IS HARD TO KILL.

By H. M. Stanley.

During the first Summer spent in Mexico, before becoming accustomed to the various forms of grotesque and poisonous insect life, I was much annoyed by the praying mantis, *Mantis religiosa*. This decidedly rollicky "bug," locally known as *compomoche*, would sail into my room in the evening and proceed to careen around on the table among the writing materials with a diabolically knowing twist to its hammer-shaped head and goggle eyes, most disturbing to a consecutive train of thought.

Once, in utter desperation, after many times driving the pest from my writing pad, I caught up a pair of scissors and made a

dash at it to see if I could settle it by decapitation. The cut caught it just in front of the wings and the severed head, fore-legs, and about one-half an inch of the slender thorax worked itself to the floor and was packed away by the ants. The part which remained standing on the table was one and one-half inches in length, and consisted of balance of the thorax, wings, two pairs of legs and the abdomen.

For possibly half a minute this was perfectly still, then deliberately the wings were spread. This spreading of the wings was laterally as in flight; first the cases were raised until nearly perpendicular. The wings then opened like fans, forming two parallel, vertical planes. At the same time the more forward pair of the four legs left was drawn well under the body, well to the front and straightened, causing a very erect position to be assumed. In this curious pose a slow, circling walk from right to left was commenced, the rear legs traveling more rapidly, or in reality having more lateral reach from the position of the body; the same number of steps would carry them over more ground. This was kept up for an hour, when it ceased.

The next morning, finding it yet standing, I touched it with a lead pencil. Again it started on its circular march, but the wings were only slightly opened. Up to 10 P.M. on the night of the third day after the decapitation, this same effect was produced, the only difference being the gradual lessening in the amount of energy exerted, both as to rapidity of motion, amount of space covered and duration. This covers at least seventy-four hours. On the morning of the fourth day the body was lying on its side, and all signs of life had ceased.

In order to ascertain if this motion was entirely without method, I placed a book in the path on the second day and was surprised to see with what care and judgment it was surmounted. I verified this experiment on a number of occasions and always with the same result. A few evenings ago, here in New Mexico, I tried it again, but found that some twelve hours was the limit. Possibly this may be accounted for by the fact that this is a much colder climate than San Ricardo, where I first tried it, in old Mexico.

Will some of our entomologists tell us if this is an unusual display of vitality for an Orthoptera?—*Popular Science News.*

COLEOPTERA OF CENTRAL ILLINOIS.—No. II.

By A. B. WOLCOTT, Bloomington, Ill.

I have previously recorded (ENT. NEWS, vol. vi, p. 309) 102 species of Coleoptera taken in the vicinity of Bloomington. The present list is of species taken the past season, representing collecting trips averaging about two a week.

About twenty-five per cent of the past season's collecting is as yet undetermined (not having been submitted to authorities for identification), but as the list now contains nearly 250 species, I thought it well to give it at the present time.

The country surrounding this place is almost entirely open prairie, with here and there a heavy patch of timber, which is rapidly being converted into fire-wood. The soil is being brought well under cultivation and drained; even swamps of considerable size are yielding up their fertile land under the drainage system; these facts combine to make the *present* study of our Coleoptera very opportune.

The past Summer, I spent four days collecting at Springfield, Ill., which, although in central Illinois, is sixty miles south of Bloomington; and there took some very good things, those species which were taken only at Springfield are marked with a *, those which occurred at both Springfield and Bloomington are designated with a †, the remainder were taken within a radius of thirty miles from Bloomington.

I take the present opportunity of thanking Messrs. H. F. Wickham, W. M. Hill and Chas. C. Adams and especially Dr. G. H. Horn, for their determination of many of the following species:

Correction.—*Galeruca xanthomelæna* Schr. of my former list must be erased as the determination was an error.

CICINDELIDÆ.

*Tetracha virginica *Linn.*
Cicindela unipunctata *Fabr.*
hirticollis *Say.*

CARABIDÆ.

Carabus sylvosus *Say.*
serratus *Say.*
Calosoma scrutator *Fabr.*
Elaphrus ruscarius *Say.*
†Pasimachus elongatus *Lec.*
Scarites subterraneus *Fabr.*
Scarites substriatus *Hald.*
Clivina corvina *Putz.*
impressifrons *Lec.*
bipustulata *Fabr.*
Bembidium inæquale *Say.*
nitidulum *Dej.* [*Linn.*
quadrimaculatum
Tachys incurvus *Say.*
Amara interstitialis *Dej.*
obesa *Say.*
†Diplochila laticollis *var.* major *Lec.*

Calathus gregarius *Say.*
Platynus octopunctatus *Fabr.*
decorus *Say.*
Casnonia pennsylvanica *Linn.*
Lebia atriventris *Say.*
viridis *Say.*
scapularis *Dej.*
pumila *Dej.*
Cymindis pilosa *Say.*
Apenes sinuata *Say.*
Brachynus americanus *Lec.*
cordicollis *Dej.*
Chlænius erythropus *Germ.*
sericeus *Forst.*
prasinus
tricolor *Dej.*
† tomentosus *Say.*
pennsylvanicus *Say.*
Brachylobus lithophilus *Say.*
Geopinus incrassatus *Dej.*
Cratacanthus dubius *Beauv.*
Harpalus caliginosus *Fabr.*
Stenolophus ochropezus *Say.*
Bradycellus rupestris *Say.*
Anisodactylus sericeus

HALIPLIDÆ.

Cnemidotus 12-punctatus *Say.*

DYTISCIDÆ.

Laccophilus maculosus *Germ.*
proximus *Say.*
Coptotomus interrogatus *Fabr.*
Agabus semivittatus *Lec.*
tæniolatus *Harr.*
Colymbetes sculptilis *Harr.*
Thermonectes basilaris *Harr.*
Cybister fimbriolatus *Say.*

GYRINIDÆ.

Gyrinus (confinis?) *Lec.*
analis *Say.*
Dineutes assimilis *Aube.*

HYDROPHILIDÆ.

Hydrophilus ovatus *G. and H.*
triangularis *Say.*
Tropisternus nimbatus *Say.*
glaber *Hbst.*
Berosus striatus *Say.*
Laccobius agilis *Rand.*
Creniphilus subcupreus *Say.*

SILPHIDÆ.

Necrophorus orbicollis *Say.*
tomentosus *Web.*
Silpha inæqualis *Fabr.*
noveboracensis *Forst.*

PSELAPHIDÆ.

Bryaxis (abnormis?) *Lec.*

STAPHYLINIDÆ.

Aleochara fuscipes *Fabr.*
Creophilus villosus *Grav.*
Cryptobium bicolor *Grav.*
Erchomus ventriculus *Say.*
Conosoma crassum *Grav.*

SCAPHIDIIDÆ.

Scaphidium *var.* piceum *Mels.*

COCCINELLIDÆ.

Coccinella glacialis *Fabr.*
Myzia (pullata?) *Say.*
var.?
Psyllobora 20-maculata *Say.*
Brachyacantha ursina *Fabr.*
Hyperaspis undulata *Say.*
signata *Oliv.*

ENDOMYCHIDÆ.

Rhanis unicolor *Ziegl.*
Aphorista vittata *Fabr.*

EROTYLIDÆ.

Dacne 4-maculata *Say.*

COLYDIIDÆ.

Ditoma thoracica *Say.*
Bothrideres geminatus *Say.*
Cerylon castaneum *Say.*

RHYSSODIDÆ.

Rhyssodes exaratus *Ill.*
Clinidium sculptile *Newm.*

MYCETOPHAGIDÆ.

Mycetophagus punctatus *Say.*
flexuosus *Say.*

DERMESTIDÆ.

Dermestes lardarius *Linn.*
caninus *Germ.*

Dermestes marmoratus *Say.*
Attagenus piceus *Oliv.*
Trogoderma ornatum *Say.*
Anthrenus musæorum *Linn.*
varius *Fabr.*

HISTERIDÆ.

Hister abbreviatus *Fabr.*
Epierus sp. not det.
Saprinus pennsylvanicus *Payk.*
Aeletes politus *Lec.*

NITIDULIDÆ.

Carpophilus hemipterus *Linn.*
brachypterus *Say.*
Conotelus (obscurus?) *Erich.*
Epuræa truncatella *Mann.*
Phenolia grossa *Fabr.*
Omosita colon *Linn.*

PARNIDÆ.

Dryops lithophilus *Germ.*

HETEROCERIDÆ.

Heterocerus (mollinus?) *Kies.*

ELATERIDÆ.

Cryptohypnus abbreviatus *Say.*
Elater nigricollis *Hbst.*
linteus *Say.*
Drasterius dorsalis *Say.*
Melanactes piceus *De G.*

BUPRESTIDÆ.

* Dicerca lurida *Fabr.*
Melanophila longipes *Say.*
Chrysobothris femorata *Fabr.*
* Acmæodera pulchella *Hbst.*
Agrilus otiosus *Say.*

LAMPYRIDÆ.

Eros aurora *Hbst.*
Plateros canaliculatus *Say.*
Lucidota atra *Say.*
Pyropyga decipiens *Harr.*
Photinus scinctillans *Say.*
pyralis *Linn.*
Photuris pennsylvanica *De G.*
Podabrus basilaris *Say.*
tomentosus *Say.*
Telephorus carolinus *Fabr.*
flavipes *Lec.*
bilineatus *Say.*
Polemius laticornis *Say.*

CLERIDÆ.

Aulicus sp. not det.
Thaneroclerus sanguineus *Say.*
Orthopleura damicornis *Fabr.*
Chariessa pilosa *Forst.*
Necrobia violaceus *Linn.*

PTINIDÆ.

Hadrobregmus carinatus *Say.*
Lasioderma testaceum *Duft.*
Bostrichus bicornis *Web.*

LUCANIDÆ.

Dorcus parallelus *Say.*
Platycerus depressus *Lec.*
Ceruchus piceus *Web.*

SCARABÆIDÆ.

Chœridium histeroides *Web.*
Onthophagus hecate *Panz.*
pennsylvanicus
Atænius gracilis *Melsh.* [*Harold.*
Geotrupes semiopacus *Jek.*
Clœotus aphodioides *Ill.*
Trox unistriatus *Beauv.*
Lachnosterna gibbosa *Burm.*
hirticula *Knoch.*
Anomala binotata *Gyll.*
Chalepus trachypygus *Burm.*
Allorhina nitida *Linn.*
Euphoria inda *Linn.*
fulgida *Fabr.*
Cremastochilus harrisii *Kirby.*
Osmoderma scabra *Beauv.*

CERAMBYCIDÆ.

Orthosoma brunneum *Forst.*
† Smodicum cucujiforme *Say.*
Eburia 4-geminata *Say.*
† Romaleum atomarium *Dru.*
† Batyle suturalis *Say.*
Xylotrechus colonus *Fabr.*
Strangalia luteicornis *Fabr.*
Leptura vittata *Germ.*
rubrica *Say.*

Leptostylus aculiferus *Say.*
Dectes spinosus *Say.*
Tetraopes femoratus
var. basalis

CHRYSOMELIDÆ.

Anomœa laticlavia *Forst.*
Babia quadriguttata *Oliv.*
Cryptocephalus 4-guttatus *Knoch.*
mutabilis *Melsh.*
bivittatus *Say.*
Fidia longipes *Melsh.*
viticida *Walsh.*
Chrysomela casta *Rogers.*
Gastroidea dissimilis *Say.*
cyanea *Mels.*
† Melasoma scripta *Linn.*
Phyllobrotica limbata *Fabr.*
Disonycha triangularis *Say.*
pennsylvanica *Ill.*
ermicollis
xanthomelæna *Dalm.*
alternata *Ill.*
Haltica chalybea *Ill.*
Systena frontalis *Fabr.*
tæniata *Say.*
Chætocnema (confinis?) *Cr.*
Odontota nervosa *Panz.*
* Cassida nigripes *Oliv.*
† bivittata *Say.*
† Coptocycla guttata *Oliv.*

BRUCHIDÆ.

Bruchus pisorum *Linn.*
obsoletus *Say.*

TENEBRIONIDÆ.

Merinus lævis *Oliv.*
Scotobates calcaratus *Fabr.*
Xylopinus anthracinus *Kn.*
Tenebrio molitor *Linn.*
Tribolium confusum *Duv.*
Hoplocephala viridipennis *Fabr.*
Platydema excavatum *Say.*
Boletotherus bifurcus *Fabr.*
Boletophagus corticola *Say.*
Meracantha contracta *Beauv.*

CISTELIDÆ.

Hymenorus obscurus *Say.*

MELANDRYIDÆ.

Penthe obliquata *Fabr.*
pimelia *Fabr.*
Melandrya striata *Say.*

MORDELLIDÆ.

Tomoxia sp. not det.
Mordella melæna *Germ.*
lineata *Mels.*
Mordellistena scapularis *Say.*

ANTHICIDÆ.

Corphyra pulchar *Lec.*

PYROCHROIDÆ.

Pyrochroa femoralis *Lec.*
† Dendroides canadensis *Latr.*

MELOIDÆ.

Melœ angusticollis *Say.*
Nemognatha vittata *Fabr.*
Macrobasis unicolor *Kirby.*
* Epicauta cinerea *Forst.*
† trichrus *Poll.*
* *var.*
vittata *Fabr.*
lemniscata *Fabr.*

RHIPIPHORIDÆ.

* Rhipiphorus limbatus ♂♀ *Fabr.*

RHYNCHITIDÆ.

† Rhynchites hirtus *Fabr.*

OTIORHYNCHIDÆ.

† Epicærus imbricatus *Say.*
Otiorhynchus ovatus *Linn.*

CURCULIONIDÆ.

Lixus concavus *Say.*
Endalus limatulus *Gyll.*
Gymnetron teter *Fabr.*
Centrinus scutellum-album *Say.*
perscillus *Sch.*
Balaninus uniformis *Lec.*
nasicus *Say.*

BRENTHIDÆ.

Eupsalis minuta *Dru.*

CALANDRIDÆ.

Rhodobænus 13-punctatus *Ill.*
Sphenophorus robustus *Horn.*
pertinax *Oliv.*
Sphenophorus melanocephalus
Cassonus corticola *Say.* [*Fabr.*

ANTHRIBIDÆ.

Brachytarsus variegatus *Say.*

NOTE.—The *Nemognatha vittata* of my list was taken on mullen, at the edge of sparse timber, only one specimen was found.

———o———

SINGULAR HABIT OF A CECIDOMYID.

By ANNIE TRUMBULL SLOSSON.

In the Summer of 1894, at Franconia, I one day saw resting upon a leaf a *Chrysopa*—lacewing fly—that seemed to have a black raised spot upon each wing. As I stooped to examine it more closely it flew away. A day or two later I again saw a similar insect, but failed to capture it. The same day I saw one flying and took it with my net. But it proved to have no such spots as I had seemed to see, and I was much puzzled. This happened several times. I would see plainly one or two dark spots on the wings of a *Chrysopa* in the air or on a leaf, but when I captured the insect there were no spots there. On one such occasion I found in my net a tiny, dark bodied fly, and wondered if it could have any connection with the mystery. The point was settled soon after by my taking a *Chrysopa* with a similar fly still clinging to one wing. I detached this from its support and sent it to Mr. Coquillett for identification. He returned it labeled "*Cecidomyia* sp." Since that time I have taken a great many specimens of *Chrypsopa* and *Meleoma* with a similar fly on one or both primaries. These generally dropped off the wing either in net or cyanide bottle. But this Summer I succeeded in preserving a specimen of *Chrysopa emuncta* Fitch, with its little burden intact. These I sent to Mr. Nathan Banks, and asked a solution of the puzzle. Mr. Banks cannot explain the mystery and had never before heard of this peculiar habit among the Diptera. He suggests that the Cecidomyid may be one that makes galls upon certain plants infested by aphids upon which *Chrysopa* feeds, and where it would naturally oviposit. "The fly," he writes, "being so frail may find it of advantage to attach itself to a stronger flying insect." This is ingenious and reasonable. But it will be a difficult matter to prove it by observation. I am anxious to know if anyone else has noted facts similar to or the same as those I recorded, and if any explanation has been given.

SPIDER FARMING.

Although entomologists have often raised spiders for purposes of scientific observation and investigation, spider raising as a money making industry is something rather novel. One has only to go four miles from Philadelphia, on the old Lancaster pike, says a Philadelphia paper, and ask for the farm of Pierre Grantaire to see what can be found nowhere else in this country, and abroad only in a little French village in the department of the Loire.

Pierre Grantaire furnishes spiders at so much per hundred for distribution in the wine vaults of merchants and the nouveaux riches. His trade is chiefly with the wholesale merchant, who is able to stock a cellar with new, shining, freshly labeled bottles, and in three months see them veiled with filmy cobwebs, so that the effect of twenty years of storage is secured at a small cost. The effect upon a customer can be imagined, and is hardly to be measured in dollars and cents. It is a trifling matter to cover the bins with dust, but to cover them with cobwebs spun from cork to cork, and that drape the neck like delicate lace, the seal of years of slow mellowing, that is a different matter. The walls of Mr. Grantaire's spider house are covered with wire squares from six inches to a foot across, and behind these screens the walls are covered with rough planking. There are cracks between the boards apparently left with design, and their weather-beaten surfaces are dotted with knot holes and splintered crevices. Long tables running the length of the room are covered with frames, wooden boxes and glass jars. All of these wires in the room are covered with patterns of lace drapery, in the geometical outlines fashioned by the spider artists. The sunlight streaming through the door shows the room hung with curtains of elfin-woven lace-work.

It is not all kinds of spiders that make webs suitable for the purposes of the wine merchant, and those selected by Mr. Grantaire are species that weave fine, large ones of lines and circles. They are the only webs that look artistic in the wine cellar on the bottles. The spiders that weave these are principally the *Epeira vulgaris* and *Nephila plumipes*.

When Mr. Grantaire has an order from a wine merchant he places the spiders in small paper boxes, a pair in a box, and ships them in a crate with many holes for the ingress of air. The

price asked, ten dollars a hundred, well repays the wine merchant, who, at an expenditure of forty or fifty dollars, may sell his stock of wine for a thousand or more dollars above what he could have obtained for it before the spiders dressed his bottles in the robes of long ago. Mr. Grantaire has on hand, at a time, 10,000 spiders, old and young, the eggs of some of which, the choicest, he obtains from France.

When the mother spider wishes to lay her eggs she makes a small web in a broad crack, then she lays say fifty eggs, which she covers with a soft silk cocoon. In two weeks (or longer in Winter) the eggs begin to hatch, an operation that takes one or two days. The egg shells crack off in flakes and the young spiders have a struggle to emerge. They then begin to grow, and in a week look like spiders. They often moult and shed their skins like snakes. The brood has to be separated at a tender age, else the members of the family would devour each other until only one was left.—*Natural Science News.*

———o———

List of Rhopalocera Taken in Webster, New Hampshire.

By W. F. FISKE.

Danias archippus, common, two broods; the second not a full one.
Euptoieta claudia, rare, August.
Argynnis idalia, common, July 1 to September.
cybele, very common, June 20 to August.
aphrodite, very common, June 20 to September.
atlantis, scarce on lowlands, com. on mountains, June 12 to Aug.
myrina, very common, May to October, three broods.
bellona, very common, May to October, three broods; appears earlier than *myrina*.
Melitæa phæton, common, June, very local.
harrisii, common, June, local on higher altitude than *phæton*.
Phycoides nycteis, common, June, local.
tharos, very common, May to September.
Grapta interrogationis, rare, both forms in Fall brood.
comma, com. form *harrisii*; March, September, form *dryas*, June.
faunus, rare on lowlands, common on mountains.
progne, some years common, others rare, rare in '95.
j-album, some years common, larva found on blackberry; common in 1894, '95.
Vanessa milbertii, common, two and perhaps three broods.
antiopa, some years common, two broods; common in 1892 '93 and '94; very common in '93.

Pyrameis atalanta, common.
huntera, at times common, common in '94; scarce in '95.
cardui, common in 1887, '88, rare until 1895.
Junonia cœma, said to have been seen, but authority not very good.
Limenitis arthemis, common in 1886, '87, then rare until 1893, common in 1894 and '95; two broods, but second not a full one.
Limenitis var. *proserpina*, rare, forms between the two occasionally taken.
disippus, common, two broods.
Satyrus alope, common, July.
var. *nephele*, rare, July, intermediate forms common.
Debis portlandia, somewhat common, June, July.
Neonympha canthus, common, July.
eurytris, common, June.
Thecla humuli, common, May to August; two broods.
calanus, common, June, July; one brood.
strigosa, scarce, June; one brood.
acadica, scarce, June; one brood.
henrici, scarce April, May.
augusta, common, local, April, May.
niphon, very common, April to June.
titus, common, June, July.
Feniseca tarquinius, common, May to September; broods numerous.
Chrysophanus hypophlæas, very com., May to October; broods numerous.
ab. *fasciata*, common, all intermediate grades common.
ab. without outer row of spots, scarce.
expixanthe, somewhat common, cranberry bogs in July.
thoe, rare, May, June.
Lycæna pseudargiolus, common, April, May.
var. *lucia*, not common, April, May.
form *neglecta*, common, June, July.
comyntas, common, May to August; two broods.
Pieris rapæ, very common, April to October.
oleracea, rare, April and Aug.
Colias philodice, very common, May 1 to November 6, 1895; four broods.
var. *albanus*, rather common, in Fall broods; in 1895 in Spring broods also.
var. *anthyale*, scarce, rare in Spring, but more common in Fall broods in 1895.
Papilio turnus, common, May, June.
troilus, not so common, June, July; 2nd brood rare in August.
asterias, scarce, formerly com.; two and perhaps three broods.
Carterocephalus mandan, rare, June.
Ancyloxypha numitor, common, local, June.
Pamphila hobomok, common, June.
var. *pocohontas*, scarce, June.
sassacus, common, May, June.

Pamphila metea, somewhat common, local, May.
mystic, very common, June ; rare in September.
leonardus, common, August, September.
peckius, common, June to October ; three broods.
cernes, common, June ; scarce, August, September,
manataaqua, scarce, July.
metacomet, very common, June, July.
otho egeremet, rather common, July.
bimacula, not common, June, July.
delaware, rare, one specimen July 10.
Amblyscirtes vialis, common, May, June.
samoset, scarce, June.
Nisoniades brizo, scarce, June.
icelus, common, May, June.
persius, rare, August and probably also June.
juvenalis, common, June.
Eudamus pylades, common, June.
tityrus, common, June, July.
bathyllus, one specimen.*

I have personally observed all the above except *C. mandan*, *E. claudia* and *J. cœma*. *Mandan* and *claudia* are undoubtedly native, but the occurrence of *J. cœma* is somewhat doubtful.

Prodenia exquisita Moeschl. = *pulchella* H. S.—This moth is quite common in Jamaica, going as high up in the mountains as Cinchona, where it was taken by Mr. C. H. Nicholls. I find I have a note on its larva, which may as well go on record. Mrs. Swainson found the larva in the neighborhood of Bath, and described it as "soft dark brown, darker marks along sides and back, greenish brown above legs ; feeds on castor-oil plant." A form of the same species was bred by me in Feb., 1893, from a larva eating potato, received from Mr. J. R. Reece, Pedro, P. O. The pupa is shiny, smooth, brown.—T. D. A. COCKERELL.

Polyphylla variolosa.—On July 3, I took a specimen (♂) of this species in Ogunquit, Me., which, although normal in other aspects, had the antennæ on its right side peculiarly developed. From a greatly dilated third joint two separate fourth joints sprung, each bearing its own tip, and both clubs were perfectly developed. I found the males of this species to be very common, flying in the evening—and took several females laying eggs in small holes in a sand bank on a hill.—HARVEY N. DAVIS, Providence, R. I.

* NOTHING so helps a newspaper as the imparting of useful information. "How shall I keep ants out of the sugar-bowl?" asks a correspondent. "Fill the sugar-bowl with salt," promptly responds *Texas Siftings*.

ENTOMOLOGICAL NEWS.

Published monthly (except July and August), in charge of the joint publication committees of the Entomological Section of the Academy of Natural Sciences, of Philadelphia, and the American Entomological Society. It will contain not less than 300 pages per annum. It will maintain no free list whatever, but will leave no measure untried to make it a necessity to every student of insect life, so that its very moderate annual subscription may be considered well spent.

ANNUAL SUBSCRIPTION $1.00, IN ADVANCE.

Outside of the United States and Canada $1.20.

☞ All remittances should be addressed to E. T. Cresson, Treasurer, P. O. Box 248, Philadelphia, Pa.; all other communications to the Editors of ENTOMOLOGICAL NEWS, Academy of Natural Sciences, Logan Square, Philadelphia, Pa.

PHILADELPHIA, PA., OCTOBER, 1896.

"The American girls have apparently come to the conclusion that the amusements which satisfied them last year are too stale to satisfy them for another season and they are going to adopt others which promise 'more fun.' Butterfly and moth hunting are to be counted amongst these novel recreations, and as they necessitate suitable costumes, which can be made as prettily as desired, they will doubtless soon become popular.

To catch a butterfly requires only a net, a little skill, and a little patience, but the capture of a moth is accompanied by more work, and a corresponding amount of fun. To begin with, it is necessary to attract them to a convenient spot by tempting them with something nice to eat, and for this purpose it is best to set out, just before dusk, with a pot of sugar and treacle, and a little rum or anise-seed oil with which to smear the leaves and trunks of trees. This is certain to attract hordes of moths. Then after sunset steal forth with dark lantern and net and secure the prey. A sport such as this suggests great possibilities of fun, and also of picturesque costumes; full skirts, high laced boots, to protect one from the dew and damp, and a small cap, being the most important points to be remembered in preparing such a toilette."
—*Montreal Gazette.*

The above piece of newspaper entomology was sent to us by a valued correspondent who says :—

"Our favorite science is threatened with the danger of becoming a fashionable fad with suitable costumes." We hardly think the study of the Heterocera is in any danger and we would rather encourage the 'dear girls' in their pursuit, as we are sure some of them would become properly interested in the science. Even if they only destroyed the moths for sport they would be no worse than our economic friends, who kill them, that miserable farmers may have larger crops, which, of course, is a matter of no importance (except to the farmer).

THE LARGEST INSECT EGG.—It may be as surprising and as interesting to the readers of ENTOMOLOGICAL NEWS as it was to the writer to know that certain beetle eggs are as large as those of a humming bird.

Some time ago a letter was received from a correspondent in Barberton, South African Republic, about "the beetle which lays an egg as large as the humming bird egg." The writer replied, expressing some incredulity, and by return mail received a female specimen of the large Buprestid, *Sternocera orissa*. In the accompaning letter the correspondent said that the beetle had laid an egg in the cyanide bottle in which it was placed after capture, but that the egg had been lost. This statement seemed to render the matter still more incredible, but, upon dissecting the beetle, another fully developed egg was found, which, to our surprise, measured 9.2 mm. in length, by 6.4 mm. in transverse diameter. Its color was light reddish brown, and there was a beautiful reticulate sculpturing. None of the writer's associates had ever seen or heard of anything of the sort, nor could a reference to the egg of *Sternocera* be found. Mr. F. C. Pratt, an Englishman connected with the Department of Agriculture, and who was formerly employed by the British Museum, informed the writer, however, that he had seen something similar in the British Museum, and suggested that a letter to Mr. C. O. Waterhouse might bring out the facts. A letter was, therefore, written to Mr. Waterhouse, who has very kindly and promptly replied that the large size of the eggs of *Sternocera* is well known to him and to certain German dealers who have offered them to the British Museum for sale. Mr. Waterhouse, however, is not aware of any record, except that Gory, in his monograph of the Buprestidæ, figures the egg of *S. chrysis*, the figures being 9 mm. in length. The eggs in the possession of the British Museum are said by Mr. Waterhouse to be those of *S. sternicornis* and are 7.5 mm. in length.

Thus the egg of *S. orissa* mentioned above is probably the largest insect egg of which any record has been made. The specimen has been deposited in the collection of the U. S. National Museum.—L. O. HOWARD, Washington, D. C.

DEPARTMENT OF ECONOMIC ENTOMOLOGY.

Edited by Prof. JOHN B. SMITH, Sc.D., New Brunswick, N. J.

Papers for this department are solicited. They should be sent to the editor, Prof. John B. Smith, Sc.D., New Brunswick, N. J.

Proceedings of the Association of Economic Entomologists.—The Association met at Buffalo, N. Y., August, 21 and 22, with a good attendance of members present. The papers presented were all of general interest, and much discussion was had on the subjects presented. It was on the whole a very successful meeting, and beside the advantage derived from the discussions, the association of the members with each other, and the personal exchange of opinions was of the highest interest and value.

At the session held on the morning of the 21st, Prof. C. H. Fernald, the President, read his annual address, in which he treated of the "Evolution of Economic Entomology." He began by proving the importance of the matter in ancient times, and cited Pliny for a long series of suggestions, as to methods by which insect injury could be avoided. Some of these were decidedly interesting and he followed with a list of the recommendations made by subsequent writers including such invaluable and infallible methods as hanging the bones of a mare's head upon the paling surrounding the garden, or anointing them with the blood of lizards or similar materials. Later on insecticides began to be used, and among the first to be suggested was white hellebore boiled in milk. The importance of collecting specimens and of destroying them in their several stages began to be recognized quite early, and the importance of universal action was urged even in the earliest times. The rapid increase in knowledge within the last decade was briefly sketched, and it was urged that we should endeavor to secure uniform laws throughout the country to regulate the measures against certain kinds of insects to prevent their undue spread and harmfulness. Previous laws on the subject were also referred to; but these were cases where the insects themselves were actually cited into court to answer for the damage that they did, and if they failed to appear, which was usually the case, they were excommunicated. It was suggested that this kind of law had never produced any satisfactory effect, and the regulations to be now prescribed were rather such as would compel agriculturists to adopt reasonable methods to prevent spread and check injury.

Mr. L. O. Howard read a paper on "Some Temperature effects upon Household Insects." He stated that it is becoming the practice to preserve furs, valuable rugs and articles of clothing from the attacks of moths and the like by placing them in cold storage, and this method has proved to be absolutely effective in the past. The question has arisen, however, at what temperature should these articles be kept in order to insure them

against danger from the pests, and yet not subjected to a temperature which largely increases the cost of storing them. Experiments were detailed covering a large number of insects, with the results about as follows:—as against the ordinary clothes moths, *Tinea* species, a temperature of 40 degrees is sufficient to prevent injury ; as against the species of *Attagenus* a temperature of 44 degrees is sufficient. The same temperature will serve against the species of *Trogoderma*. Against *Dermestes vulpinus* a temperature of 45 degrees will suffice. It seems, then, that a temperature from 40 to 42 degrees will be sufficient to check development in those insects that ordinarily infest household goods and clothing, and keeping them at a temperature below freezing simply increases the cost without adding anything to the benefit. It is suggested that it would be a good plan in every case, to treat the articles to be protected with super-heated steam to make certain that no life remains in them, at the time they go into the storage rooms. After that, a temperature of 40 degrees will be absolutely safe.

Mr. F. M. Webster gave the results of "A three years' study of an outbreak of the chinch bug in Ohio." By means of maps Mr. Webster showed the distribution of this insect for the three years last past. Prior to 1895 there could hardly be said to have been a chinch bug invasion in Ohio, although they had appeared to some extent the year previous. The invasion of 1896, however, though it was not a very serious one, was the worst which had ever visited them, and at least two farmers committed suicide on account of the losses they saw staring them in the face. The Station had made preparations for distributing the chinch bug disease on a large scale, and some 1200 applications were received and honored. The season of 1896 was an ideal one for the development of the disease and during the early part of the year it was also a favorable one for the spread of the chinch bug. That is to say, the weather early in the season favored the spread and effectiveness of the disease. The result was, that while injury to wheat was severe in some sections, yet injury to corn was almost entirely prevented. A curious point in the invasion was that it covered territory on the whole entirely different from that which was covered by the invasion of 1896, while this in turn covered counties which were not infested in 1894. Therefore, for three years last past, the chinch bug has infested each year different portions of the State ; although there are a few localities that have suffered two or three years in succession. Mr. Webster says as a result of his experiments and observations, that in a year like the present, when the weather conditions are favorable, the chinch bug disease will prove useful to a certain extent ; but he is also fully convinced that unless the weather conditions are favorable the disease is entirely unreliable. His results in this particular agreeing with those that had been reached by Prof. Forbes of Illinois.

Mr. Perkins stated that he had known the chinch bug to be injurious for five years in certain sections in Vermont. They cover only a small territory and were to be found there in troublesome numbers each year.

Mr. Hopkins stated that in 1895 the insect was a pest on wheat, oats and corn in one of the Virginia Valleys; but that he had had no complaints of it this year. Dr. Bethune said that the insect had been found in some numbers at Grimsby, Ontario; but was not troublesome. Mr. Howard said that he had some complaints of the insect from Virginia; but that these occurred during a period of wet weather, and he replied to the complainants that if their weather was anything like that at Washington, they need not fear the further spread of the insect or serious injury from them. No further complaints were received and he assumed that his predictions were verified.

(To be continued.)

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer, for each number, three weeks before date of issue. This should be remembered in sending special or important matter for certain issue. Twenty-five "extras" without change in form will be given free when they are wanted, and this should be so stated on the MS. along with the number desired. The receipt of all papers will be acknowledged.—ED.

IT may interest the readers of your valued ENTOMOLOGICAL NEWS, to hear that I obtained a pairing of *Attacus cecropia* ♂ with *Saturnia pyri* (the largest European moth) ♀; but eggs proved to be barren, which was quite a disappointment, as I expected to raise a new interfaunal hybrid.—HERMAN AICH, Elberfeld, Germany.

MEXICAN ALEURODES.—Mr. Maskell has lately published as new two species of *Aleurodes* from Mexico, which I sent him (Tr. N. Z. Inst., vol. xxviii.) As he has not cited all the particulars regarding the discovery of these insects I desire now to state that *A. nicotianæ* was found at Guanajuato, by Dr. Alfred Dugès; while *A. erigerontis* was taken by myself in 1893 at Escalon.—T. D. A. COCKERELL.

IN the Annales Belgique, 1896, vii, the following North American Buprestidæ are described by C. H. Kerremans:—

Taphrocerus texanus, p. 312, this is *T. agriloides* Crotch.
T. cylindricollis, p. 312, is *T. lævicollis* Lec.
Pachyschelus politus, p. 322, is *P. lævigatus* Say.
Brachys horni, p. 324, is *B. æruginosa* Gory.—GEORGE H. HORN.

A GENEROUS PROPOSITION TO NEWS SUBSCRIBERS.—I am willing to make translations of zoological, and particularly of entomological publications for the readers of the NEWS, from the French and German for a remuneration of twenty cents per hundred words and postage. The money obtained in this manner is to be expended by the NEWS in subscriptions for entomologists who cannot afford to pay the subscription fee; or in some other way which will tend to increase the number of subscribers to the NEWS.—LUDW. B. GOLDHORN, 200 Hunter St., Sing Sing, New York.

Entechnia is a synonym of *Melitoma* Latr.

Pompilus maurus and *funereus* I find to be varieties of one species, belonging to the peculiar genus *Anoplius*. The female has only one ocellus.

Parapompilus differs from *Planiceps* only in number of submarginal cells; it is *Micropteryx*, and its proper generic name is *Ferreola*. All North American species appear to be one.—W. HAMPTON PATTON, Hartford, Conn.

TO THE TUMBLE-BUG.

(BURNS.)

The cleanest corn that e'er was dight
May hae some pyles o' caff in;
Sae ne'er a fellow creature's light
For random fits o' daffin!

Haith! quat your wark, ye ill-bred bug!
Ye'll soon get smoor'd aboon your lug,
If mickle langer ye maun tug
At sic a rate;
Howkin at yon auld midden drug
Wi' filthy pate.

Tis unco strange ye're hirplin there,
Sae hard at wark and fash't wi' care—
On every side, baith far and near,
Ilk bug's at play,
Hoyse then your wings and tak' the air,
And fly away.

Canna ye hear, this bonnie Spring,
How all around the lavrocks sing?
And see ilk insect's bizzing wing
Blink in the ray?
Hae ye nae note wi' them to bring,
And glad the day?

Awa! I say, ye glaikit beast!
And 'mang the dewy grass tak rest!
Hech! warlike thoughts maun fill your breast
Wi' kindlin' ire,
Sin' now ye're rowin' up sae fast
Sic balls tae fire.

I'll stap, right glad to see ye fight,
If only fae ye had to smite;
Sae wark awa,' wi' a' your might,
And weel prepare
Tae meet ilk bug that comes in sight,
Wi' ye tae war.

Stap! whaur ye gau'n new sae fast?
Ye dinna think, ye little beast,
Alane tae row a ba' sae vast
As that ye've made!
Haud! there's anither, come at last,
Tae gie his aid.

Down wi' your butt, and tak your head,
Ye dousie beast! for much I dread
Ye'll brak your neck, or be mislead
Some ither road—
An' if ye fa'—alake! ye're dead
Beneath your load.

Get aff, I say, ye lazy bug!
Dinna ye see your brither tug,
And sweat, and push, while ye sae snug
Ride like a skellum!
Jimp down, I say, ye misleared hog!
And tak the helm.

Hae ye nae heart to help your mate,
And tak your share, and push the weight?
Then, tak that blow upo' your pate—
'Twill gar ye feel,
And help, I ken, your brither's fate,
Sae true and leal.

(E. E. HIGBEE, D.D., LL.D.,
late Supt. Public Instruction, Penna.)

"YORRICK," 1850.

Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of species to be **limited to twenty-five** for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a 2 cent stamp with all insects for return of names. **Please put date of capture and exact locality on each specimen.** Before sending insects for identification, read page 41, Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Entomological Literature.

Under the above head it is intended to note such papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology, unless monographs, or containing descriptions of new genera, will not be noted. Contributions to the anatomy of insects, however, whether relating to American or exotic species will be recorded.

1. THE CANADIAN ENTOMOLOGIST, August, 1896.—New bees of the genera *Xenoglossa* and *Podalirius* (*Anthophora*), T. D. A. Cockerell.

A new grain beetle, F. H. Chittenden. Note on *Mamestra comis*, A. R. Grote. The Coleoptera of Canada, xviii, H. F. Wickham. Notes on *Aphilanthops* and description of a new species, S. N. Dunning. Index to the Mantidæ of North America, North of Mexico, S. H. Scudder. A variety of *Hepialus argenteo-maculatus*, E. F. Heath. Note on *Eutolype electilis*, A. R. Grote. John B. Lembert, C. J. S. B. [Notes on] *Colias cæsonia*, *Libythea bachmani*, *Thecla sheridani*.

2. TRANSACTIONS . . . . OF THE KANSAS ACADEMY OF SCIENCE (1893–1894), xiv.—Sand-dune collecting, W. Knaus. *Conorhinus sanguisugus*, its habits and life-history, B. S. Kimball.

3. PROCEEDINGS . . . OF THE ZOOLOGICAL SOCIETY OF LONDON, 1896, i.—A preliminary revision and synonymic catalogue of the Hesperiidæ of Africa and the adjacent islands . . . . , W. J. Holland. On moths collected at Aden and in Somaliland, Lord Walsingham and G. F. Hampson.——Ibid., 1896, ii.—A contribution to a knowledge of the Hymenoptera of Ceylon, C. T. Bingham. On the butterflies of St. Vincent, Grenada, and the adjoining islands of the West Indies, F. D. Godman and O. Salvin.

4. THE ENTOMOLOGIST, August, 1896.—Fungi parasitic on butterflies, J. C. Rickard. New experiments on the seasonal dimorphism of Lepidoptera (cont.), A. Weismann. Notes on the synonymy of Noctuid moths (cont.), A. G. Butler.

5. NOVITATES ZOOLOGICÆ, iii, 2.—New Lepidoptera, W. Rothschild. New Geometridæ in the Tring Museum, W. Warren. The Passalidæ dichotomously considered, A. Kuwert.

6. BIOLOGIA CENTRALI-AMERICANA, ZOOLOGY, Pt. 129.—Arachnida Araneidea, pp. 169–184, pl. 20, O. P. Cambridge. Coleoptera, vol. iii, pt. 1, pp. 497–528, pls. 21, 22, G. C. Champion. Coleoptera, vol. iv, pt. 6, pp. 121–128, pl. 5, W. F. H. Blandford. Hymenoptera, vol. ii, pp. 377–384, P. Cameron. Rhynchota Homoptera, vol. ii, pp. 145–160, pl 9, W. W. Fowler. Diptera, vol. ii, pp. 289–304, F. M. v. d. Wulp.

7. TIJDSCHRIFT VOOR ENTOMOLOGIE, xxxix, 1, 2.—The venom of spiders, A. W. M. van Hasselt.

8. DEUTSCHE ENTOMOLOGISCHE ZEITSCHRIFT (Iris, Dresden) ix, 1.—A new species of Satyridæ, N. M. Kheil.

9. ENTOMOLOGISCHE ZEITUNG HERAUSGEGEBEN VON DEM ENTOMOLOGISCHEN VEREINE ZU STETTIN, 56 Jahrgang.—Some new Luzon Curculionidæ, J. Faust. Weevils from the Malayan Archipelago, J. Faust. Contribution to the knowledge of the Anthribidæ, K. Jordan. Six new genera of Curculionidæ and a new *Glochinorinus*, J. Faust. Some new beetles of the Indo-Australian region . . . . , K. Jordan. Curculionidæ from the Ethiopian region, J. Faust. Contribution to the knowledge of *Lamellicornia onthophila*, H. J. Kolbe. Coleoptera from Africa. iii, ibid.

10. PSYCHE, a journal of entomology, August, 1896.—Notes on the Acrididæ of New England ii, Tryxalinæ, v, A. P. Morse. The condition of *Apatela*, A. R. Grote. Preparatory stages of *Cosmosoma auge* Linn., H. G. Dyar.——Ibid, September, 1896.—Notes on the Acrididæ of New England, Tryxalinæ, vi, A. P. Morse. A Thysanuran of the genus *Anoura*, F. L. Harvey. Life-history of *Ichthyura strigosa* Grote, H. G. Dyar. Bibliographical Notes, vii, S. Henshaw.

11. ANNALS AND MAGAZINE OF NATURAL HISTORY, August, 1896.—Further notes on the anatomy and development of scorpions, and their bearing on the classification of the order, M. Laurie. Descriptions of some new Lepidoptera from Nyasaland, A. G. Butler. New species of Pyralidæ from the Khasia Hills, W. Warren.

12. PROCEEDINGS OF THE UNITED STATES NATIONAL MUSEUM, xviii, [Extracts].—Remarks on the synonymy of some North American Scolytid beetles, W. Eichoff. On some reared parasitic hymenopterous insects from Ceylon, L. O. Howard and W. H. Ashmead. List of Coleoptera collected . . . . [in] East Africa, ... with descriptions of new genera and species, M. Linell.

13. MEMORIE DELLA REALE ACCADEMIA DELLE SCIENCE DI TORINO, (2), xlv.—Diptera of Mexico, Part iv, Muscidæ, E. Giglio-Tos.

14. ANNUAIRE DU MUSEE ZOOLOGIQUE DE L'ACADEMIE IMPERIALE DES SCIENCES DE ST. PETERSBOURG, 1896, 1, 2.—On two new forms of the heteropterous family Gerridæ, V. Bianchi. On a new genus of Tenthredinidæ allied to *Clavellariae* Oliv., A. Semenow. Note on *Derus* Motsch , T. Tschitscherine.

15. BULLETIN SCIENTIFIQUE DE LA FRANCE ET DE LA BELGIQUE, xix, 1.—Researches on the circulatory apparatus of the Araneida, M. Causard.

16. TRANSACTIONS OF THE AMERICAN ENTOMOLOGICAL SOCIETY, xxiii, 2.—The Lamiinæ of North America, C. W. Leng, with notes and descriptions, J. Hamilton. Descriptions of new parasitic Hymenoptera, W. H. Ashmead.

17. SCIENCE, New Series, No. 88.—A gall-making Coccid in America, T. D. A. Cockerell.

18. JOURNAL OF THE LINNEAN SOCIETY OF LONDON, Zoology, No. 161.--On the spinning glands in *Phrynus*; with an account of the so-called "Penis" and of the morphology of the Operculum, H. M. Bernard. On the Coleoptera obtained by Dr. Anderson's collector during Mr. T. Bent's expedition to the Hadramant, South Arabia, C. J. Gahan. On the Arachnida and Myriopoda obtained by Dr. Anderson's collector during Mr. T. Bent's expedition to the Hadramant, South Arabia; with a supplement upon the scorpions obtained by Dr. Anderson in Egypt and the Eastern Soudan, R. I. Pocock.

19. TRANSACTIONS OF THE LINNEAN SOCIETY OF LONDON, Zoology, vi, 4.—The comparative morphology of the Galeodidæ, H. M. Bernard.

20. Species des Hymenopteres d'Europe et d'Algerie, T. v, pp. 545, et seq. This volume completes the Braconidæ.

21. ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE BELGIQUE, T. xl, 7.—New Trachydæ, C. Kerremans.

INDEX TO THE PRECEDING LITERATURE.

The number after each author's name in this index refers to the journal, as numbered in the preceding literature, in which that author's paper is published; * denotes that the paper in question contains descriptions of new North American forms.

THE GENERAL SUBJECT.

Henshaw 10.

MYRIAPODA.

Laurie 11, Pocock 18.

ARACHNIDA.

Cambridge 6*, van Hasselt 7, Causard 15, Bernard 18, 19, Pocock 18.

THYSANURA.

Harvey 10*.

ORTHOPTERA.

Scudder 1*, Morse 10 (two).

HEMIPTERA.

Kimball 2, Fowler 6*, Bianchi 14, Cockerell 17*.

COLEOPTERA.

Chittenden 1*, Knaus 2, Kuwert 5, Champion 6*, Blandford 6*, Faust 9 (four), Jordan 9 (two), Kolbe 9 (two), Eichhoff 12, Linell 12, Tschitscherine 14, Leng and Hamilton 16*, Gahan 18, Kerremans 21*.

DIPTERA.

v. d. Wulp 6*, Giglio-Tos 13*.

LEPIDOPTERA.

Grote 1 (two), 10, Heath 1, Holland 3, Walsingham and Hampson 3, Rickard 4, Weismann 4, Butler 4, 11, Rothschild 5, Warren 5, 11, Kheil 8, Dyar 10 (two), Godman and Salvin 3*.

HYMENOPTERA.

Cockerell 1*, Dunning 1*, Cameron 6*, Howard and Ashmead 12, Semenow 14, Ashmead 16*, Bingham 3, André 20.

Doings of Societies.

PHILADELPHIA, September 8, 1896.

A stated meeting of the Feldman Collecting Social was held at the residence of Mr. H. W. Wenzel, 1509 S. 13th Street.

Members present: Messrs. Bland, Boerner, Seiss, Castle, Trescher, Frank Hoyer, Albert Hoyer, Fox, Griffith, H. W. Wenzel and Schmitz. Honorary members: Dr. Henry Skinner and Prof. John B. Smith. Meeting called to order at 8.45 P.M., President Bland presiding. Minutes of the last meeting read and approved. Chairman of the Committee on Field Meeting reported progress.

Prof. Smith spoke of his recent trip to the Pacific coast and gave a brief account of the places visited, the collections examined and character of the localities. He spoke highly of California as a fruit-growing district and also as producing an immense variety of insect life. Collecting in California, however, must be understood before success can be obtained. The climatic conditions are so different from our own in the East that an experience gained in Pennsylvania or New Jersey is of little use in California. Especially is this true where collecting is done on the desert, because in such cases everything depends upon local conditions and upon the times when moisture can be obtained. Irrigation has made an immense difference in some parts of California, and it is odd to see on one side a flourishing citrus orchard of the most vivid green, while on the opposite side there is nothing but a dry desert with a scant growth of thorny or prickly vegetation.

At San Bernardino he examined the collection of Mr. W. G. Wright, who has gathered together a very interesting series of butterflies, containing many examples of rare species. There is also a vast amount of material in Coleoptera in bottles and jars that undoubtedly contain much of value. Mr. Wright has been a diligent collector, and is perhaps as well acquainted as any one with the peculiarities of desert insect fauna.

At Pomona he saw the collection of Prof. H. C. Fall, which was surprising in its excellence and extent. It is perhaps the best collection of Coleoptera in California, and very largely the result of Mr. Fall's own diligent collecting. The specimens are not only numerous, but they are in exceedingly good condition, and the collection will compare favorably with some of the best of those in the East.

At San Francisco, the California Academy of Natural Science is gradually accumulating an exceedingly good collection of insects, and our old friend, Mr. Carl Fuchs, is in charge of the

coleopterological portion of it. He is also making a collection to illustrate the different orders of insects, and has done a very great amount of work on this series. Many of the specimens in the collection are types of species described from Lower California, and these are treated with extreme care. Every specimen is carefully mounted, and with every specimen is associated a number which refers to all the details known of the specimen, where it was collected, when, by whom determined, and whatever facts of interest may be connected with it. The labels of the various specialists who have had the insects are most carefully preserved and placed on the pin with the insect itself. In this way it seems hardly possible that any mistake could occur as to the type of any of the species recently described from Lower Californian collections. Prof. Smith mentioned certain other collections, and spoke in high terms of the beautiful collecting grounds in the immediate vicinity of San Francisco.

During the evening Prof. Smith handed the members a bottle of beetles, also a number of *Polyphylla crinita* Lec. from Alameda County, California, which were kindly donated by Mr. Fuchs.

Dr. Griffith exhibited three boxes of material collected by Mr. Johnson and himself recently on their tour from Washington, D. C., to Popes Creek on the Potomac, stating that the Coleoptera were taken by himself, while the Diptera represented Mr. Johnson's collecting; he further said that this represented a geographical distribution of the localities visited.

Dr. Skinner spoke of his recent trip to the mountains of east Tennessee and western North Carolina. Owing to the altitude, the fauna really represented that of Canada, the only representative of the fauna of the South of any importance being *Argynnis diana*, which he had the pleasure of taking. *Cychrus* were diligently searched for, but none found ; this may have been on account of being too late in the season for them (August 14 to September 4.)

It was moved by Mr. Wenzel, seconded by Mr. A. Hoyer and carried, that the Social extend a hearty vote of thanks to Mr. Carl Fuchs for his donations to the members. Further, after listening to the statement made by Prof. Smith, the Social was unanimously of the opinion that the work done by Mr. Fuchs in the California Academy of Science is of the highest

interest and greatest importance. From a scientific standpoint it is a necessity, and the Academy is to be congratulated upon having a man so well able to do it as Mr. Fuchs. His work will not only benefit present students, but will form a basis upon which future study of the species now arranged may rest.

No further business being presented the meeting adjourned to the annex. THEO. H. SCHMITZ, *Secretary*.

The Entomological Section

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

PROCEEDINGS OF MEETINGS.

The following paper was read and accepted by the Committee for publication in ENTOMOLOGICAL NEWS:

THE SEVENTY-SECOND PERDITA.

By T. D. A. COCKERELL.

Perdita maculigera n. sp. ♂.—Length 5 mm., pale primrose-yellow with black markings. Head fairly large, subquadrate, broader than long; cheeks unarmed, with a beard of white hairs beneath; eyes pale pea-green; antennæ yellow beneath, black above; head yellow with these black markings,—the usual anteorbital dots, a large irregularly square black patch above each antennæ, sending a line from its inner upper angle to the middle ocellus, a patch connecting the ocelli, an obliquely placed large oval spot, touching and sending a very narrow line along the orbit, barely separate from the lateral ocelli, and the black occipital region. Thorax yellow with these black markings,—a transverse mark on collar, a small mark on tubercles and a small mark just below, a large basal patch on pleura and a streak beneath the wings, the mesothorax except the lateral margin and a pair of longitudinal yellow stripes, the scutellum except the hind margin irregularly, the postscutellum, and the dorsum of metathorax except a large yellow patch somewhat trifid behind; tubercles colorless with an opaque yellow spot. Wings hyaline, iridescent, nervures brown; stigma very peculiar, its basal portion colorless and hyaline, the rest intense black, forming a large nearly, round spot. Marginal cell rather short, its postigmatal portion much the largest, the substigmatal part very short, owing to the rounded end of the stigma; third discoidal distinct; second submarginal large, narrowed half or more to marginal. Legs yellow, anterior coxæ tufted with white hairs, anterior femora and tibiæ with a black stripe behind, middle femora and tibiæ similarly striped, and a black spot near end of middle femora in front, hind coxæ with a black dot near apex, hind femora with a broad obligue

black stripe, commencing behind and ending on the front, hind tibiæ black without, hind tarsi blackish. Abdomen narrow, subcylindrical, curved, base of first segment black, connecting by a black median line with the first of five broad bands; the first of these bands is uniformly black; the second, third and fourth are divided transversely by a yellow streak, and the third and following ones become dark brownish instead of black; the apical portion of the abdomen presents four black spots, the upper pair united by a brownish line; venter yellow without markings.

Hab.—Las Cruces, New Mex., on narrow-leafed willow, May 2, 1896, in company with *P. salicis*. Nearest to *P. punctosignata*, but quite distinct. The bicolored stigma is very peculiar and unique in the genus.

OBITUARY.

On Sunday morning, August 9th, at 1 A. M., Mr. HENRY F. SCHOENBORN died at the City of Washington, D. C. Mr. Schoenborn was well known to most of the older collectors of Lepidoptera, and those who have had the pleasure of visiting him at his home in Washington have seen not only a very good local collection, but have received a hearty welcome.

Mr. Schoenborn was born Dec. 31, 1833, at Suhl, Thuringen, Germany, and twenty years later, on June 6, 1853, he came to the United States and settled at Washington. With a love for nature, inborn, he soon began making collections, and started in Entomology somewhere about 1865. Since that time his collections has grown continuously, and Mr. Schoenborn has succeeded in getting together a great many interesting and rare species. He was always liberal with his material, and would give freely of such duplicates as he had. His collection contains quite a number of rarities and a few types, principally of Noctuidæ described by Henry Edwards and J. B. Smith. He had been for some years a sufferer from asthma, and during the past year or two Bright's disease of the kidneys had been slowly sapping his strength. The collection was not disposed of by will, and we understand that the widow is holding it for sale.

Miss GEORGIANA ELIZABETH ORMEROD, F. E. S., died at St. Albans, Herts, England, on August 19, aged 73. She was a sister of Miss Eleanor A. Ormerod, the writer on economic entomology, and was elected a Fellow of the Entomological Society of London in 1880.

Dr. EDWARD EPPELSHEIM, coleopterist, died at Germersheim, Germany, on June 6, 1896. He was born in 1837.

ENTOMOLOGICAL NEWS for September was mailed August 27, 1896.